

In the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application.

Upon entry of the present amendment, the claims will stand as follows:

Please cancel claims 4 and 5 without prejudice.

Please amend claims 1, 6 and 12 as follows:

1. (Currently Amended) An adjuvant comprising an attenuated toxin having a residual toxic activity of less than one-two thousandth ($<1/2000$) that of the natural toxin corresponding thereto, prepared by attenuating ~~the natural~~ a toxin, or a subunit thereof, which retains ~~having~~ serine residues, glutamic acid residues, and lysine residues in its natural amino acid sequence, ~~or by attenuating a subunit thereof~~, wherein said toxin is selected from the group consisting of cholera toxin, pertussis toxin, heat-labile toxin of pathogenic *E. coli*, Staphylococcus α toxin and β toxin, heat-labile toxin of pathogenic *E. coli*, Staphylococcus α toxin and β toxin, and thermostable hemolytic toxin of *Vibrio parahaemolyticus*.

2. (Original) The adjuvant of claim 1, wherein said toxin is a mutant having an amino acid sequence of the corresponding natural toxin wherein one or more amino acid residues are substituted, inserted, deleted, and/or added, and having an adjuvant activity.

3. (Original) The adjuvant of claim 1, wherein said toxin is a natural toxin.

Claims 4 and 5 (Cancelled).

6. (Currently Amended) The adjuvant of claim ~~[[5]]~~ 1, wherein said toxin is a natural cholera toxin ~~having a residual toxic activity of less than one two thousandth ($1/2000$) that of said corresponding natural toxin~~, prepared by attenuating a natural cholera toxin with formalin treatment.

7. (Original) The adjuvant of claim 6, wherein said residual toxic activity is less than one-ten thousandth (1/10,000) that of said corresponding natural toxin.

8. (Previously Presented) A vaccine preparation comprising the adjuvant of claim 1 and one or more vaccine antigens.

9. (Original) The vaccine preparation of claim 8, wherein said vaccine preparation is formulated for intranasal administration.

10. (Original) The vaccine preparation of claim 8, wherein said vaccine preparation is formulated for oral administration.

11. (Original) The vaccine preparation of claim 8, wherein the vaccine preparation is formulated for percutaneous administration.

12. (Currently Amended) The vaccine preparation of claim 8, wherein said vaccine comprises one or more antigens from one or more pathogenic microorganisms, said microorganisms selected from the group consisting of influenza virus, rotavirus, measles virus, rubella virus, mumps virus, AIDS virus, *Bordetella pertussis*, diphtheria bacillus, *Helicobacter pylori*, enterohaemorrhagic *Escherichia coli* (EHEC), *Chlamydia*, *Mycoplasma*, Malaria parasite, coccidium protozoa, and schistosome, *Clostridium tetani*, hepatitis B virus, and Japanese encephalitis virus.

Please add new claims 13-15 as follows:

13. (New) The adjuvant of claim 1, wherein said toxin is attenuated by chemical treatment.

In re Application of:

Aizawa et al.

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14. (New) A method of vaccination comprising administering the vaccine preparation of claim 8 to a subject in need thereof.

15. (New) The method of claim 14, wherein the vaccine preparation is administered orally, intravenously, intranasally, or percutaneously.